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March 31, 2009

Wendy S. Wyels
Chief, Compliance and Enforcement Section
California Regional Water Quality Control Board
Central Valley Region
1102 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Re: Comments on Draft Cleanup and Abatement Order, Rubicon Trail,
El Dorado County

Dear Ms. Wyels:

Thank you for the opportunity to comment in writing on the draft cleanup and abatement order dated 23 January, 2009, and for the several opportunities you have graciously afforded El Dorado County to meet personally with you and your staff. The written comments of El Dorado County consist of this letter plus its attachments, along with the letter of March 23, 2009, concerning an extension of time, plus the letter dated March 25, 2009, addressed to your legal counsel, Patrick Pulupa. El Dorado County also incorporates by this reference the comments made by the Rubicon Trail Foundation.

Your letter enclosing the draft order says that El Dorado County "is responsible for providing oversight of the Rubicon Trail within El Dorado County as a public road" and the draft order characterizes El Dorado County as a "discharger." El Dorado County does not agree that the County is "responsible" for oversight of the Rubicon Trail, or is a "discharger." Any discharges are caused by members of the public exercising what courts have called their "fundamental and inalienable right" to travel over a historic public road, which right the County has no power to control, limit or terminate.

As explained in more detail in the County's letter of March 25, 2009, the Rubicon Trail is a modern name for what was originally called the Wentworth Springs Road, which is a historical right of way over the Sierra Nevada mountain range that has been in continual use since the 1840s. The public has a right of way over it pursuant to a federal law called R.S. 2477. El Dorado County doesn't own the land over which Wentworth Springs Road travels. El Dorado

County has no property interest in the route under federal law, except for the 1-2 mile segment called the Ellis Creek Intertie which runs from the north dam on Loon Lake to its intersection with the Wentworth Springs Road just west of Ellis Creek, in which the County has deeded easements granted by the U.S. Forest Service and a private property owner. Those easements lie over the R.S. 2477 right of way, and do not extinguish it, so if the easements were deeded back to the underlying landowners, the public would still retain its right to use the historic roadway pursuant to R.S. 2477.

Under California Streets & Highways Code §941, the County only has the obligation to maintain those public roads in the County which have been formally accepted into the county-maintained road system. Only one 7 mile segment of Wentworth Springs Road (from the Airport Flat Campground to the Wentworth Springs Campground) has ever been accepted into the county-maintained road system.¹ The remainder of the Rubicon Trail has never been accepted into the county-maintained road system. Streets & Highways Code §941(b) says that “[n]o county shall be held liable for failure to maintain any road unless and until it has been accepted into the county maintained road system by action of the board of supervisors or its designee.” The draft order directly conflicts with Streets & Highways Code §941(b) because it purports to hold the County liable for the failure to maintain a section of public road that the Streets & Highways Code says the County cannot be held liable for.

The County’s ability to manage the Rubicon Trail is limited under California law to only those powers that are expressly delegated to counties in the Vehicle Code, and for the one segment that has been accepted into the county-maintained road system, the County only has those limited additional powers given in the Streets & Highways Code specifically for “county highways.” As a result of the combination of federal and state law, the County has no ability to restrict usage, require a permit, charge a fee, or specify what equipment vehicles are required to carry. The only stretch of the Rubicon Trail on which the County has the lawful ability to install a gate is the segment from the Airport Flat to the Wentworth Springs Campgrounds, and then under Streets & Highways Code §942.5, that segment can be closed only for short periods to protect the public, to protect the roadway from damage during storms, or during construction operations. A gate there would only divert usage to the Ellis Creek Intertie, which is more popular anyway and which the County has no legal power to gate.

The only relevant power the County has under California law over the entire length of the Rubicon Trail to control traffic is the power to vacate the right of way under Vehicle Code §2011 and Streets & Highways Code §8324, but these two statutes specify that the power to vacate can only be exercised if the road is not necessary for present or future use. Several cases have held that this finding cannot be made if there is evidence that the road is in fact needed for public use, which would be the situation with the Rubicon Trail. The appellate court in *City of Lafayette v. County of Contra Costa* (1979) 91 Cal. App. 3d 749, 756, flatly stated that a public road “may not be closed if needed for vehicular traffic.” Therefore any attempt by the County to vacate the

¹ In the County’s letter of March 25, 2009, this segment was estimated to be about 6 miles long, but DOT now advises that it is closer to 7 miles long, and the segment from the Wentworth Springs Campground to the county line is 8 miles long (not 12). The Ellis Creek Intertie is between 1 and 2 miles long.

Rubicon Trail, or to gate it, or to limit users, or to require a permit, or to charge a user fee, would likely be blocked in court by members of the public. Even if the road could be vacated for public use under California law, this would leave open the question of whether members of the public have a residual right to use the road under federal law, and would also leave easements of necessity for the owners of the private property along the Trail which would still generate much use.

The legal issues are discussed in greater depth in the County's letter of March 25, 2009, but in summary, the basic legal problem with the draft order is that it makes the County liable for failure to maintain the Rubicon Trail in a manner that the Regional Board approves, which directly conflicts with Streets & Highways Code §941 which says the County cannot be held liable for failure to maintain a non-county-maintained road, or it requires the County to close the Rubicon Trail, which directly conflicts with state statutes and case law holding that the county cannot close a road that is used by the public. Some people have been confused on this issue because the draft Rubicon Trail Master Plan developed by a County consultant included suggestions like trail closures and user limits, but these suggestions were never vetted for legality and the draft plan was never adopted by the County.

Under federal law, the owner of most of the land over which the Rubicon Trail passes, the U.S. Forest Service (USFS), has the power to take reasonable steps to manage its land, but it cannot vacate an R.S. 2477 public right of way, or gate the road, or limit normal usage, or require a permit or a fee. The private parties who own the remainder of the land over which the Rubicon Trail passes, have no ability to vacate or restrict the public's use of the Trail either.

The reality is that El Dorado County does not itself cause any sediment, human waste or petroleum waste on the Rubicon Trail. Those problems are caused by members of the public exercising their fundamental and inalienable right to use a public road, over whom the County has no legal control. Just because a public road is located in the County does not make the County responsible for its use, or misuse. In a more typical situation, the Regional Board issues a cleanup or abatement order against an entity that owns or controls a facility which discharges pollutants. In that situation it is rational to order the discharger to clean up or cease its operations. The circumstances of the Rubicon Trail are completely different, however. In the County's opinion, the Regional Board cannot hold the County responsible for the discharges of others, nor can the Regional Board force the County to spend public funds to maintain the Rubicon Trail, nor can the Regional Board make the County liable for failure to maintain the Trail, nor can a Regional Board by threatening sanctions coerce the County into taking certain actions, such as closing or gating the Trail, that state law does not give the County the power to take.

Despite the many legal restrictions on what a county can be forced to do on a non-county-maintained road, El Dorado County in the past has voluntarily spent its time and money improving the Rubicon Trail to decrease the adverse effects of users, utilizing public monies from its general fund, grants awarded by the OHMVR Commission, and funds from other sources. The draft cleanup and abatement order gives no credit to the County for the

improvements it has made, but instead seeks to punish the County for its past efforts by threatening monstrous financial penalties unless the County does even more in the future regardless of whether it has the necessary funding. The County is committed to continue to do what it can, within the limited resources available, to try to make conditions on the Rubicon Trail better. However, it is not a proper exercise of the Board's jurisdiction to label El Dorado County as the "discharger" of pollutants that are actually being discharged by members of the public exercising public rights that the County is not responsible for and cannot legally prevent or control.

The County is in the midst of an unprecedented fiscal crisis, caused in part by the State eliminating funding but still mandating that the County continue with expensive programs. As just one example out of many, CalTrans very recently announced that El Dorado County would not be receiving \$20 million in state funding for a road project that the State had previously guaranteed the County would get. The announcement that the state funding would not materialize came a week after the County had signed a \$27 million contract for the work based on the State's guarantee. Given this treatment by the State, I am sure that you can appreciate how disappointing it is for the County to shortly thereafter receive a draft cleanup and abatement order from a State agency requiring the County to spend its money on a roadway that the County doesn't even own or control, or else suffer huge financial penalties. The County board of supervisors has recently had to lay off 150 County employees, and is faced weekly with heart-rending decisions about such things as whether the shortage of funding means that County agencies have to stop delivering meals to invalid elders or instead stop providing public health services to those with debilitating diseases and no other options. El Dorado County urges the Regional Board to maintain a sense of perspective when considering the gravity of the problems with the Rubicon Trail. For example, as explained later in this comment letter, the fecal coliform count over the Fourth of July weekend, one of the busiest of the year, at Spider Lake, one of the most crowded spots along the Trail, was only about one third of the public health standards for beaches, a fairly low level public health risk. The cost of trying to solve this fairly low level of public health problem has to be balanced with the other truly life-or-death needs of the County's citizens. All County expenditures have to come out of a drastically shrinking pot, and the County has to make agonizing decisions in prioritizing its expenditures, and urges the Regional Board to take that stark reality into account.

The following comments are made in response to the specific numbered paragraphs of the draft order.

1. The Rubicon Trail didn't "once" connect Georgetown on the west slope with the Homewood (or Tahoma) areas on the shore of Lake Tahoe. It still does. What is now called the Rubicon Trail follows the historic Wentworth Springs Road to Wentworth Springs Campground, and from there the historic roadway goes to Rubicon Springs and then into Placer County and over the summit to Lake Tahoe. It is the only crossing of the Sierra Nevada mountains, suitable for wheeled vehicles, in the approximately 30 mile stretch between Highway 50 to the south (Echo Summit) and Highway 80 to the north (Donner Pass). It is still used, year round, by members of the public for through passage over the Sierra crest. Both the Wentworth

Springs Road and the Ellis Creek Intertie follow the routes marked as "jeep trails" on the U.S.G.S. topographical maps from 1953.

2. This paragraph is essentially correct, but doesn't express the significance of the two historical County actions. The 1887 declaration referred to what we now call the Rubicon Trail as a "public highway." The 1887 declaration was helpful because it acted as a formal recognition that an R.S. 2477 right of way had already been accepted by public use. The declaration thus solved an endemic problem with R.S. 2477, which is that it was hard to determine where public roads established under that act actually were, and it signified that the Wentworth Springs Road was a public right of way as distinguished from a private one. The 1887 declaration did not accept the Trail into the county-maintained road system, which under Streets & Highways Code §941 can only be done by a formal action of the board of supervisors that clearly accepts a roadway into the county-maintained system and which makes it a "county highway."

The 1989 resolution was motivated by a concern that "the status of the Rubicon Trail as a public road has come into question" in the 102 years since the 1887 action. The 1989 resolution confirmed that the 1887 declaration described what we now call the Rubicon Trail, and confirmed that the Rubicon Trail, and its variants including the Ellis Creek Intertie, have been public roads, and still are public roads, never having been abandoned. The 1989 resolution also reaffirmed that the Rubicon Trail was a "non-maintained public road."

3. This paragraph is essentially correct. The responsibility for the Rubicon Trail within County government was transferred from the Parks and Recreation Division of the General Services Department to the County Department of Transportation (DOT), in large part because of budget issues. The County DOT is currently the department which enjoys responsibility for the 1,076 miles of county-maintained roadways in the County. It is inaccurate to characterize the County's role as one of "oversight and management" given that the County has no legal obligation to manage the Trail.

4. The Rubicon Trail crosses the Sierra crest at an elevation of just over 7,000 feet, and therefore traverses both the eastern and western slopes of the Sierra Nevada mountain range. The rest of this paragraph is accurate.

5. El Dorado County does not "allow" OHV users to access the Rubicon Trail. Members of the public have the fundamental and inalienable right to use public roadways such as the Rubicon Trail under both federal and state law. El Dorado County does not have the legal ability to stop OHV users from using the Trail.

Characterizing the amount of work that has been done in the past on the Rubicon Trail as "minimal" leaves an inaccurate impression. A great deal has been done on the Rubicon Trail not only by the County but also by Trail users, who have an independent federal legal right to maintain an R.S. 2477 public right of way. It must be kept in mind that it is extremely difficult to perform any work at that elevation, in an area where it is difficult to bring in machinery or

heavy equipment. Many thousands of hours of hand labor have been put in by the County and by user groups every year for the past few years. One user group has advised the County that its members expended 1,860 hours of labor in 2008 alone.

El Dorado County has expended a great deal of effort on the Trail, even though the County is precluded by statute from spending its Road Fund money on most of the trail, and even though the County has no maintenance obligation under state law. The normal types of road work, such as paving, culverts and ditches, are not only unsuitable for the terrain, they would also be difficult to construct and would be environmentally and aesthetically ruinous. Given these legal and practical limitations, some of the tasks that El Dorado County has nevertheless been able to accomplish on the Trail in the recent past are:

Trail Operations and Management

In 2001, the County requested grant funds from the Off Highway Motor Vehicle Recreation Division (OHMVRD) of the State Department of Parks & Recreation to address concerns related to the impact of off-highway vehicle use on the Rubicon Trail. Since that time, grant funds have been requested annually, leading to just over \$700,000 in OHMVRD grant funds being received and used to facilitate:

- purchases of personal sanitation units;
- production and distribution of educational materials on safety and conservation on the trail, including brochures, maps and website development;
- protection and patrol by law enforcement;
- purchase of equipment to support the law enforcement effort;
- consultant services to provide research into the traffic levels, noise levels, water quality testing including petroleum levels and fecal coli form, trail erosion sites, and other conditions that measure the impact of off highway vehicles on the trail and surrounding areas;
- waste management services;
- land survey services to map the location of the trail.

In addition to the OHMVRD funds, \$70,000 in federal grant funds were received and used for educational materials and personal sanitation units.

Bridge Project Environmental Planning

In 2006, the County hired a grant writer to prepare and submit applications for OHMVRD funds for environmental analysis and documentation necessary to support construction of two bridges on the Rubicon Trail, one over Gerle Creek and the other over Ellis Creek. A consultant is currently under contract to perform the work necessary to obtain environmental clearance by November of 2009, with construction expected to take place in 2010, depending on the date the environmental clearance is obtained and assuming that no unforeseen

impediments are encountered. The goal of the projects is to remove current low water crossings and replace them with bridge crossings to bring the vehicle traffic up and out of the creeks.

Bridge Project Construction Grants

The County applied for and was awarded Highway Bridge Program (HBP) grant funds to actually construct the bridges over Ellis and Gerle Creeks described above. The construction date for the bridges is dependent upon environmental clearance which is expected late in 2009. At this time construction is scheduled for 2010 depending upon the date environmental clearance is received.

California Geological Survey

The California Geological Survey (CGS) provides information and advice to protect life and property from natural hazards and to promote a better understanding of California's geologic environment. The County began meeting with the CGS regarding the preparation of a comprehensive survey of the Rubicon Trail in the spring of 2008. The CGS survey, when delivered to the County (expected at the end of March 2009), will serve as a tool that can be used to develop a comprehensive maintenance plan for the Rubicon Trail, plus will be a location-based repository for information about Trail conditions as they evolve over time. Data points are plotted along the trail to which specific monitoring and maintenance activities are connected. As of the date of this comment letter, the survey has been viewed by the County and is in the final stages of completion. Once received, the County will be using the survey as a guide for its on-going maintenance efforts.

Trail Maintenance Projects 2006 through 2008

May 2006 - Traffic and Engineering Surveys were conducted at the request of the Rubicon Oversight Committee (ROC) and the U.S. Forest Service (USFS) to regulate off highway vehicle parking on USFS property adjacent to Ice House Road. On May 16, 2006 the Board of Supervisors approved a Resolution sanctioning "No Parking – Tow Away" zones on Ice house Road (a paved county-maintained road) along the westerly shoulder from mile post 28.55 to 31.05 in order to address this issue.

County DOT, in a joint effort with the El Dorado National Forest, conducted a Traffic and Engineering Survey to designate several short sections of paved road to dual-use designation to permit both OHV-licensed and street-licensed vehicles to legally use the paved road. The Board of Supervisors adopted Resolution 131-2006 on May 16, 2006 to allow dual use.

August 2007 - At the request of the Parks & Recreation Division of the General Services Department, the Maintenance Division of DOT carried out a trail maintenance project in August of 2007. The purpose of the project was to begin addressing wet conditions on the Rubicon Trail east of the Wentworth Springs Campground. This area had been identified by Rubicon Oversight Committee members, County staff and the Forest Service during field visits. DOT

staff performed the work using in-house labor plus material provided by the USFS under a permit to remove material from USFS stockpiled aggregate material near Gerle Creek Reservoir. Fractured rock was hauled in over the two week time period to fill rutted areas and provide a driving surface of aggregate material instead of soil. The total budgeted amount of \$10,000 included in the Parks & Recreation budget for fiscal year 2007/2008 was expended.

July 2008 - The responsibility for the Rubicon Trail within County government was transferred from the Parks and Recreation Division to the DOT on July 1, 2008. From July 7, 2008 through July 18, 2008, DOT staff hauled rock fill material to an area beyond the Wentworth Springs Campground in a continuing effort to address wet conditions identified by field trips with USFS staff. A combination of “rolling dips” and “water bars” using fractured rock were installed to divert and disperse the water from the roadbed where large potholes had developed.

September 2008 - DOT staff, in cooperation with Sacramento Municipal Utility District (SMUD) employees, resurfaced the access road from the top of the second dam at Loon Lake to the Trailhead below the dam to allow for the delivery of the restroom facility in October of 2008.

October 2008 - The County had applied for and was awarded OHMVRD grant funds for the purchase of a double-walled, waterless restroom facility to be placed at Loon Lake adjacent to the beginning of the Ellis Creek Intertie on the Rubicon Trail. The restroom was installed as a measure to address the past issues related to unmanaged human waste. The County applied for and received a special use permit from the USFS to install the restroom. Under contract with DOT, a local contractor excavated by means of heavy equipment and explosive charges, a hole sufficient to install the vault restroom facility. Under the direction of DOT staff, the site was prepared for the delivery of the actual restroom facility. On October 27, 2008 a double-walled waterless restroom was delivered and installed. DOT staff accomplished the final site work and clean up, and the completed facility was placed in use on Friday, October 31, 2008.

Community Outreach and Participation

Attendance at User Group Meetings - In an effort to understand the concerns of user groups, County staff has attended many meetings of different user groups, such as the Friends of the Rubicon.

Rubicon Oversight Committee - The County established the Rubicon Oversight Committee (ROC) as a semi-formal gathering of interested parties and groups that meets monthly to consider projects, issues and concerns and to make recommendations regarding appropriate action to the County. DOT staff has been involved with the Rubicon Oversight Committee since it's formation in May of 2002. The ROC has evolved from an informal cooperative effort to coordinate agencies into an advisory body to DOT. It also functions as a place for user groups to coordinate their volunteer efforts with DOT.

Rubicon Trail Foundation - The Rubicon Trail Foundation (RTF) is a non-profit public benefit education foundation which has coordinated closely with the County in working toward the future use and health of the Rubicon Trail. The RTF offers Volunteer Leader & Land Stewardship Workshops in which participants learn skills including volunteer supervision, communication skills, project planning, safety, environment science for trail work and land use policies and regulations. Material on cumulative impacts, the Endangered Species Act, erosion, runoff, vegetation and resource damage, and road engineering is also included in the course. The County has provided input to RTF's presentations.

Paragraph 5 states that the Rubicon Trail has become incised due to heavy trail use. This should be understood in the context that public use of the Trail has continued over about 160 years. When viewed in that vast sweep of time, knowing that the Rubicon Trail is the only trans-Sierra route for 30 miles, the conditions of the Trail can be kept in an appropriate perspective.

In regard to the Regional Board's conclusions about sediment, these are drawn from Attachment A to the draft order entitled "Assessment of Sediment Delivery From the Rubicon Jeep Trail." El Dorado County asked one of the professional engineers in DOT with extensive experience in sediment issues in the Lake Tahoe area overseen by the Lahontan Regional Board to review the Assessment. Steve Kooyman's memorandum dated March 26, 2009 containing his analysis of the Assessment is attached hereto. There are a number of issues identified in the memorandum that cast doubt on the validity of the Assessment's conclusion that there is 100 cubic yards of sediment delivered annually into the waters of the state from vehicular use of the Rubicon Trail, and that this is 50 times greater than the sediment production from logging roads. One of the fundamental unwarranted assumptions that undermine the Assessment's conclusions is that there is no sediment runoff except from wheeled vehicle use. It is counter-intuitive to assume that there is no naturally-occurring sedimentation in the Sierra Nevada mountain range. Also, the Assessment assumes that the entire dust layer will run off every year, and that all runoff ends up in a creek, both of which are not only unwarranted but defy common sense. There is obviously some sediment created by motorized vehicle usage on the Rubicon Trail, but it is far less than the Assessment describes.

6. There are no particularly reliable estimates of the actual usage of the Rubicon Trail. The 35,000 vehicle estimate done in 2001 was really an estimate of people-days, not vehicles. It was an extrapolation of figures taken on one busy weekend at one location which were then extended to every day in the summer, so it is clearly skewed high. Other studies have shown that usage has decreased since 2001, most likely as a result of the Spider Lake closure in 2004 and the increased presence of El Dorado County law enforcement personnel in recent years. The Rubicon Trail Foundation has performed more recent and more rigorous trail counts. As a part of its grant application to the OHMVRD in 2008, El Dorado County estimated that there will be about 25,000 visitor days on the Trail in 2009, which when the figures for multi-day use and users-per-vehicle are taken into account, translates into an estimate that about 11,000 vehicles will use the Trail in 2009. State Highway 50, a two-lane paved trans-Sierra highway to the south, carries an average daily traffic of about 13,000 vehicles. This means that the Rubicon Trail in a year carries about the same traffic as Highway 50 does in a day.

In regard to sanitation facilities, a restroom was installed at the Loon Lake entrance to the Ellis Creek Intertie in October, 2008. Since this is federal land, the County had to obtain a permit from the USFS to install the restroom. The restroom at Loon Lake was relatively easy because it is close to a paved road (Ice House Road), so construction materials could be brought in, and the waste can be trucked out, with relative ease. Restrooms along the Trail in more inaccessible locations like Spider Lake and Buck Island Lake are much more difficult propositions. The County has submitted an application to the OHMVR Division for a grant to purchase an off-road dump truck, which if granted, would make restrooms at locations along the Trail much more feasible to construct.

The statement in paragraph 6 about people having to rely upon individual human waste disposal methods deserves some comment. Great effort has been made to improve individual human waste disposal. Since 2001, over 700 portable toilet units have been distributed to users, and over 8,600 "wag bags" (toilet-in-a-bag waste disposal kits containing a powder that gels waste and makes it biodegradable) have been distributed to Trail users. The user groups and the County have engaged in several successful user education efforts to make the use of these, and other, sanitation items much more prevalent. Peer pressure is the most effective way to induce users to carry wag bags or other sanitation devices, particularly if they are handed out by user groups for free. The County is precluded by the Vehicle Code from adopting any regulations mandating any equipment for motor vehicles, so the County cannot force users to carry equipment like wag bags.

7. The Spider Lake closure in July, 2004 was initiated by the County's concern for human sanitation at Spider Lake, which is next to Little Sluice Box and hence is popular for both extreme OHV use and camping. The County made a public health declaration on July 13, 2004 closing the private land to camping, and the USFS followed with a similar closure of the adjacent federal land to camping. Neither closure affected public travel over the Rubicon Trail, because neither the USFS nor the County had the legal power to stop or limit public use of the public right of way. Both agencies acted out of a concern for public safety, but it was never actually demonstrated that there was a particularly significant health or safety threat. There is no reported instance of any actual illness from human waste on the Rubicon Trail, and the watershed of the Rubicon River and Middle Fork American River continues to be relatively pristine. The fecal coliform study performed for the County over the Fourth of July weekend in 2004 showed coliform levels that were far less than the state health standards for beach and recreational water, and far less than the federal standard for water recreation activities. Attached hereto is a memorandum dated March 30, 2009 from Dave Johnston of the County Environmental Management Department which has the figures from the coliform study, and which indicates that the highest levels were about one-third of the Central Valley Regional Water Board's concentration limit for recreational contact. Also the memorandum notes that the testing method is incapable of distinguishing between human and animal sources.

People perceive a sanitation problem because of an unsavory odor and visible waste at certain places on the Rubicon Trail, but it has not been demonstrated that there is an actual health

hazard. The continued efforts by the County and by user groups to distribute portable toilets, wag bags, and information to users, plus the installation of a disposal facility and a restroom at the Loon Lake entrance, will continue to alleviate any problem. The County is already engaged in the process of studying the feasibility of installing several more restrooms along the trail at heavily used sites, which would require a USFS permit and an associated environmental analysis. The County has submitted an application to the OHMVRD for a grant to buy an off-road construction truck that would make the erection of additional restrooms feasible. If funding permits the County to proceed in its efforts, the sanitation problem will continue to improve.

8. The emphasis in this paragraph should be on the fact that there were only low levels of petroleum-based fluid contamination. In fact, the levels were very low. There is really no evidence to show if the very low levels were from vehicles or natural sources, or whether any of vehicular petroleum fluids get into the waters of the state. When the Sacramento Municipal Utility District did studies for its hydroelectric relicensing project in 2003, Buck Island Lake, Loon Lake and Gerle Creek all tested below the Central Valley Water Board's reporting limit for oil and grease. It is crucial for all interested parties to focus on the true relative magnitude of the problem so that scarce resources aren't allocated disproportionately.

Much effort has gone in to reducing and cleaning up oil spills from vehicles, including the following work by the El Dorado County Environmental Management Department:

Permanent Collection Facilities – Three sites were identified for placement of storage units for saturated oil absorbent materials; Ellis Creek/Loon Lake, McKinney Rubicon Springs and Wentworth Springs trailheads. Concrete pads were constructed by County Environmental Management Department staff and volunteers. A dry-chemical fire protection system has been installed in each storage unit. Approximately 650 pounds of saturated absorbent has been collected for proper disposal. The storage units are clearly marked and available to the public at all times. Contrary to anecdotal stories from individuals, these units are actually used, and the County hauls away many 55 gallon barrels of waste.

Outreach and Education – The Environmental Management Department developed and implemented a spill kit distribution and saturated absorbent material collection program for users. Approximately 3,000 kits have been distributed by County staff and volunteers to date. Printed information educating users about the importance of prevention spills and cleaning up fluid leakage on the trail is incorporated with the kits and available to all users.

Clean Wheeling Survey – County staff drafted a survey to collect information from users during spill kit distribution. Users who completed a survey were also asked to sign a pledge that they will act responsibly while on the trail.

Attached hereto is the "Rubicon Trail Automotive Fluid Spill Prevention and Control Program Progress Report" prepared by the El Dorado County Environmental Management Department for the 5 year time period from March 1, 2004 through March 23, 2009. As the report shows, County staff has been collecting between 200 and 250 pounds per year over the

past three years of saturated absorbents from the two used oil collection facilities placed at the entry points to the Trail. A third collection facility is planned to be built this year.

9. As noted above, the Regional Board's sediment assessment, Exhibit A to the draft order, has a number of deficiencies, which are discussed in the memorandum of Steve Kooyman, an engineer on the County DOT staff. The conclusion that there are between 75 and 100 cubic yards per year of sediment deposited in the watershed as the result of OHV traffic on the Rubicon Trail is not sufficiently reliable to form the basis for a cleanup and abatement order. Without more accurate studies, which take into account things like the single most important variable in estimating sediment load, rainfall, it is not possible to determine if there is a significant problem, nor is it possible to determine what are the actual causes of the sedimentation, nor is it possible to determine if any management practices are actually lowering the level.

10. The pebble count survey is similarly insufficient to form the basis for a cleanup and abatement order, or to determine the magnitude of any problem, or to allow a reliable measurement of improvement. There is no evidence that the disparity in pebble size continues for any distance downstream from the creek crossings, and there is no link whatsoever between the size of the pebbles and the survival of the fish in the streams.

11. This paragraph is essentially correct.

12. This paragraph is essentially correct. Please note that the consultant who prepared the draft management plan and EIR was not instructed to take legal limitations into account, and accordingly the draft management plan includes proposals that are legally not possible, such as closure of the Trail from November to April if there are no viable alternatives to control soil erosion during times of saturated soil conditions. As the County has pointed out in its legal memo of March 25, 2009 and elsewhere in this comment letter, neither the County nor the USFS has the legal ability to close the Rubicon Trail to members of the public, either temporarily or permanently, with the sole exception of the segment from the Airport Flat to the Wentworth Springs campgrounds, and that segment can only be closed temporarily for one of the three reasons specified in Streets & Highways Code §942.5. Therefore a seasonal closure of the Rubicon Trail is not a legally feasible option to prevent sedimentation in the wet season. The County fully expects that the erosion control measures it has taken in the past, plus those it is planning in the future, will be sufficient to decrease sedimentation.

13. It is true that the County had to pause in its process of considering the Rubicon Trail Master Plan as a result of the worst fiscal conditions in memory, necessitating the laying off of about 150 County employees and the elimination of many County programs that provide essential services to many needy residents. Nevertheless, the County DOT still intends to continue with several beneficial projects it has already started, and has applied for grant funding for other projects it would like to start.

The County is planning on building two new bridges over the two creeks the Trail currently crosses at grade, at a cost of about \$800,000, obtained from grants and other sources that the County has been pursuing for years. The construction of these two bridges will be the biggest improvement project on the Rubicon Trail, and along with the associated work on the bridge approaches, should eliminate any sedimentation concerns at those two locations. The bridges are being designed now, and the environmental work will begin as soon as the engineering work is completed. This preliminary work is expected to take most of 2009, and if there are no unforeseen impediments, the construction contract should be ready for bid by spring of 2010 with physical construction starting in summer 2010. The County also plans to improve the section of Wentworth Springs Road from Airport Flat Campground to the Gerle Creek Bridge Project site, and to improve the section of Wentworth Springs Road from the north side of the Gerle Creek Bridge Project site to the intersection of Forest Road 14N07.

County crews are scheduled to install water breaks, cross drains, rolling dips and other water quality improvements to a section of the Rubicon Trail just west of Ellis Creek for a distance of approximately 2,000 feet. This project was identified in the California Geological Survey "Trail Assessment" and was selected by DOT as a first project using the CGS data. A field inspection will be scheduled for staff to identify specific treatments as soon as trail conditions allow a visual field assessment of the project area.

County staff is planning on working with the Rubicon Trail Foundation and volunteers to distribute cardboard commodes and wag bags at the Loon Lake Trailhead.

The County has submitted applications for OHMVRD funding in the 2008-2009 funding cycle for the projects described below.

Development – Rubicon Trail Restroom, Ellis Creek Crossing Area – This proposed project involves the purchase and installation of a double vault waterless restroom facility to be placed in the vicinity of Ellis Creek crossing adjacent to the Rubicon Trail. This site has been deemed as a desirable location for users traveling along the trail between the major staging areas. Challenges with bringing construction materials in, and waste out, are being addressed.

Ground Operations – Rubicon Trail, Ellis Creek Crossing Area – This proposed project involves a grant for the purchase of an off-road rubber tracked dump vehicle to be used to haul materials such as boulders, rip-rap, aggregate, small equipment and tools to off-road sites. Also incorporated in the proposal is on-going trail maintenance, including basic erosion control treatments such as waterbreaks, cross drains and rock fill, on-going trash disposal services at Loon Lake and at Tahoma, and purchase and installation of pavement reflectors for night-time navigation and flexible marker posts to delineate the trail.

Education – Rubicon Trail Education/Public Outreach – This proposed project involves hiring a consultant to update, enhance and expand the Rubicon Trail information available to the interested public and particularly to trail users. The education/outreach project includes research with users and stakeholders to determine the outreach and educational needs, updating the

current outreach materials and creating new ones including outdoor kiosks, printed brochures/maps, and information for the County website. In addition, the proposed project includes a two day training course for volunteers who are users or stakeholder supporters of the Rubicon Trail. The proposal includes time for a training consultant to attend ROC meetings and conduct a field visit to assess the training needs. If the County is successful in obtaining funding for the project, it is anticipated that the first training session could be conducted in late fall of 2009 and the second in early Spring 2010.

Planning – Rubicon Trail – Restroom Feasibility Study – This proposed project is for a feasibility study and report to assess potential sites for restroom facilities along the Rubicon Trail within El Dorado County. Included in the project is an analysis and assessment of potential alternative sites for restroom facilities with consideration of environmental, historical, cultural and natural resource constraints. Permits would have to be obtained from the USFS with the attendant environmental analysis.

14. Public usage establishes a right of way under R.S. 2477. The declarations that the El Dorado County board of supervisors adopted in 1887 and 1989 served the function of confirming that the public had established a right of way over the Rubicon Trail, including what we now call the Ellis Creek Intertie. The USFS as the manager of the underlying federal land has not lost its ability to enforce its regulations on that land, but federal case law has established that it cannot unreasonably interfere with public use of the Trail, nor can it gate the road, or require a permit or a fee. *Wilkenson v. Dept. of Interior*, 634 F. Supp. 1265 (D. Colo. 1986). Members of the public and the County each have the independent right to maintain or improve an R.S. 2477 road. The public right of way established by historic use under R.S. 2477 can be variable depending on conditions, and can move, and is not necessarily limited to 50 feet wide. A public right of way under R.S. 2477 is not legally considered a true property interest such as an easement, and although the public right to use the route can be thought of as being in the nature of an easement, as a matter of law the existence of an R.S. 2477 right of way does not mean that the County holds an easement to the roadway. An R.S. 2477 right of way was established over what we now call the Ellis Creek Intertie, but to resolve lingering issues over its precise location, and to induce users to avoid sensitive wet areas, the USFS and a private property owner granted deeded easements to the County over what everyone now uses as the Ellis Creek Intertie. If those easements were deeded back, the public would still retain its residual right of way under R.S. 2477.

15. It is incorrect to say that El Dorado County “has not adequately managed the Rubicon Trail for OHV use,” and conclude that this “mismanagement” has resulted in environmental degradation. The public has a right of way over the Rubicon Trail under federal law, and no law, federal or state, designates El Dorado County as the “manager” of that right of way. The County has stepped in to the vacuum to do what it can to alleviate problems on the Trail, but this does not make the County the “manager” of the Trail so that it can be ordered to do more management. The County does not “cause” any waste to be discharged to the waters of the state; the “discharger” is the public exercising their fundamental and inalienable right to use public roads. The County does not “permit” waste to be discharged to the waters of the state; the

County cannot by law “permit” members of the public to use the Trail, and cannot stop them from doing so. The fact that the County helps clean up the Trail does not make the County the “discharger.” In this sense, the draft order is like telling the friends of the river that their efforts to clean up the river have not been sufficient, so they are now deemed to be “responsible” for “managing” the river and are ordered to clean up even more or face a \$10,000 per day fine. El Dorado County does not object to continuing its efforts to clean up, maintain and improve the Rubicon Trail within its financial limitations, but it should not be punished for its past efforts with a clean up and abatement order that orders it to do things it either cannot under law or doesn’t have the funding for.

16-18. The County has no comments on these paragraphs.

19. The Rubicon Trail is not “currently managed” by the County, and the County is not the “discharger.” Simply because the County has spent its resources trying to improve Trail conditions does not give it the “responsibility” to “manage” the Trail. The same logic would lead to the conclusion that if the Regional Board issues a cleanup and abatement order, then it is “responsible” for “managing” the Trail and is therefore the “discharger.”

20. The Regional Board’s order as currently drafted would require the County to take actions which may be subject to CEQA, which must be accounted for in any time limits..

The County has the following comments to the numbered paragraphs of the draft order itself.

Order par. 1- The County is already taking all reasonable steps to mitigate discharges emanating from the Rubicon Trail. The discharges are caused by members of the public exercising their right to use a public right of way under federal and state law, and the County cannot prevent them from doing so. It is inaccurate to refer to the County as the “discharger.” The actual level of discharge is quite low when compared to the many other sources of the same discharges, and the current level of discharge does not exceed established standards. The concept of reasonableness must take into account the limited resources the County has available to it. The County is precluded by law from using its Road Fund to maintain roads that are not in the county-maintained road system, so the County is dependent on funds from other sources such as grants from the OHMVRD, federal funding sources, etc.

Most of the land underlying the Rubicon Trail is owned by the U.S. Forest Service which continues to have the right to manage its land except that it cannot unreasonably interfere with public travel over the Trail, and it cannot close, gate, permit or charge a fee for public use of the Trail. The County and the USFS share interests on the Rubicon Trail, and any effort to improve the Trail would have to involve both entities.

Order par. 2- It is not legally possible for the County (or the USFS) to reduce vehicle use, for the reasons expressed in this comment letter plus the County’s letter of March 25, 2009. Any closure or limitation on use would only serve to displace users to other areas which might suffer

worse impacts, and this displacement effect might subject any closure to CEQA or NEPA. It is possible to implement other measures which will reduce discharges during saturated soil conditions and wet weather periods.

Order par. 3- While in the County's opinion the Regional Board does not have jurisdiction over the County in regard to the Rubicon Trail because the County does not own, manage or control the use of the Rubicon Trail and is therefore not a "discharger," the County does have an informal plan for those tasks the County DOT intends to implement in the near future, including many tasks already underway, as described above in this comment letter. The County does not object to making DOT's expected work plan more formal, with the cooperation of the other parties with an interest in the Trail, including the U.S. Forest Service. The memorandum by County DOT engineer Steve Kooyman attached hereto contains a list of the tasks that the process of developing a formalized plan would have to include, and estimates that it would take until May 2010 to reasonably expect a completed O&M plan. The County has not yet received the GIS base map prepared by the CGS which would become the basis for a future O&M plan. A Technical Advisory Committee (TAC) would have to be formed to insure that all of the appropriate professionals are involved and have the chance to give their input at crucial stages, including those from the Regional Board staff. It is possible that an O&M plan such as this would be subject to CEQA or NEPA and at the very least, an initial study would have to be performed. Mr. Kooyman has participated on the County's behalf with many similar projects in the Lake Tahoe basin under the supervision of the Lahontan Regional Water Quality Control Board, and therefore has a great deal of practical experience with how long and complicated these processes are, and also knows that if you rush them, you are only making them less complete and more subject to future modification. Since the County is already committed to performing a number of tasks already underway, including the two largest projects in memory (two bridges over two creeks plus approach work), and will continue with these and its other ongoing efforts directed at petroleum spillage, restroom planning and installation, etc, there is no reason to rush the development of an O&M plan. As much work as is reasonable to expect is already underway for summer 2009 and summer 2010.

Any future O&M plan must take into account the realities of funding. The County has described the various grants that it has applied for, and what it will do with the funds if the grants are awarded. Mr. Kooyman has estimated that the development of an O&M plan will cost the County approximately \$250,000, and it is not clear at this time where this money will come from.

Order par. 3a, b- A trail assessment should be relatively straightforward once the CGS base map is received.

Order Par. 3c- There is no easement for the Rubicon Trail, except for two easements along the 1-2 mile Ellis Creek Intertie which have already been recorded. The route of the Rubicon Trail depends on the historical use patterns between 1866 and 1976. The right of way the public used during that time varied with weather and other conditions such as high water, so the Rubicon Trail is different than other roads in that it has not been amenable to precise location. It might be

possible for all of the parties to settle on an agreed route, but this would require the agreement of the users, the USFS and the private landowners. The County is not averse to making an attempt at this task, but it would take a monumental effort, and any timeline would be rank speculation. In the meantime, however, route markings and user education have proven to be successful in guiding most users along a standardized route which avoids environmentally sensitive areas, and the County along with the user groups will continue their efforts to this end.

Order par. 3d, e- No comment.

Order par. 3f- New Trail segments would require formal action of the USFS and the private landowners granting a right of way. Up to now, the historical variations in the location of the right of way have provided sufficient leeway for the County, the USFS, private landowners and user groups to guide users away from sensitive areas but still stay within the outer bounds of the historical right of way, so no new land use permits have been required. There are already a number of useful bypasses in existence. The County suggests that this process has been relatively successful so far, and should suffice so that no new easements or other land use rights would be required.

Order par. 3g, h- No comment.

Order par. 3i- Federal and state law forbid the County and the USFS from imposing a permit requirement or a fee for use of an R.S. 2477 right of way. Modification of use patterns and public education can be accomplished in other ways.

Order par. 3j- State law forbids the County from instituting vehicle requirements beyond what state law already requires. State law also forbids the County from reducing the public's use of a public right of way through a gate, permit or any other measure. Human waste can be reduced by other measures.

Order par. 3k, l, m- No comment.

Order par. 4- The O&M plan should contain its own provisions for implementation. Those preparing the plan would have a better idea of when its various measures can reasonably be implemented.


Order pars. 5-7- Any specific reporting deadlines should be customized to the contents of the plan. The County presently expects that the two bridges currently being designed will be completed by the end of the construction season in 2010, barring any unforeseen impediments.

In conclusion, the County urges the Regional Board to take into account the legal situation that restricts what actions the various interested parties on the Rubicon Trail can take. The Rubicon Trail is in a fairly unique situation legally, so unique solutions are called for. Ordering legally infeasible actions will only delay progress and waste resources in legal proceedings that could be better spent on the Trail. Similarly, everyone acts within financial

restraints, and the financial restraints on California Counties at the present time are unprecedented, and frankly dreadful. Any money from the County general fund to be spent on the Rubicon Trail at present would have to be taken directly from money used for essential services. Until this situation improves, the County is totally dependent on grants and other external funding sources. Any Board order must take the stark realities of this situation into account. Finally, it is hoped that this letter and the other information the Board receives will help the Board realize that the Rubicon Trail is a much used, much loved and much cared for institution. The condition of the Trail can always be improved, but it is not the disaster that some have characterized it. El Dorado County is committed to doing what is reasonably feasible to continue to improve the Rubicon Trail, within its fiscal and practical limitations. If all of the interested parties continue in their cooperative efforts, the Trail will continue to improve, with or without a Board order.

Very truly yours,

LOUIS B. GREEN
County Counsel

By 
Edward L. Knapp
Chief Assistant County Counsel

ELK:sd
enclosures



**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION
INTEROFFICE MEMORANDUM**



Date: March 26, 2009
To: Ed Knapp, County Counsel's Office
From: Steve Kooyman, P.E.
Subject: Draft Cleanup and Abatement Order (CAO), Rubicon Trail, El Dorado County, Department of Transportation (Department) Comments

Background

The State Water Quality Control Board Central Valley Region (SWQCBCVR) issued a Draft Cleanup and Abatement Order No. R5-2009-XXXX (Order) to El Dorado County Department of Transportation (Discharger) on January 23, 2009. This Order describes various water quality discharge issues to the waters of the state, human sanitation problems, soil contamination of metals, and water contamination of petroleum-based fluids within the Off-Highway Vehicle (OHV) County non-maintained portion of the Rubicon Trail.

Key CAO Issues

The Order specifically identifies four environmental impacts by the Discharger:

1. Sediment and other waste discharges to Waters of the State;
2. human sanitation problems;
3. soil contamination of metals; and
4. water contamination of petroleum-based fluids

Based on the history of the trail use and documentation related to items 2 through 4 from the County and SWQCBCVR, the Department will only comment on the recent sediment assessment entitled "Assessment of Sediment Delivery from The Rubicon Jeep Trail" completed by SWQCBCVR.

Comments on the SWQCBCVR Background Section

Item #5 of the Order States:

"El Dorado County has allowed OHV users to access the Rubicon Trail throughout the year, and minimal work has been completed to effectively drain the trail surface and prevent or reduce sediment discharges to waters of the state. The trail has become incised due to the heavy trail use, and water from rainfall and snowmelt events is intercepted by the incised trail then transported along with sediment to stream crossings. Water also collects in large puddles and mud bog depressions in many locations along the trail, which are continuously driven through by OHVs, thereby accelerating trail erosion and sedimentation of water bodies. Many of these puddles and bogs become hydrologically connected to the stream network when trail runoff exceeds the capacity of the depression."

The first underlined statement implies that the Rubicon Trail has become incised solely due to the heavy trail use. I would contend that the trail has been in existence for over 100 years, hence, natural erosion and wagon train use over this century has also contributed to the erosion and incision of the trail probably at a greater rate than the last 20 years of OHV use. Also, as a point of erosive analysis, the natural runoff/erosion process guided by "mother nature" produces far more sedimentation on an annual basis than the seasonal OHV use. This comparison analysis is missing within the SWQCBCVR "Assessment of Sediment Delivery" document which is further discussed within the next comment section.

The second underlined statement attempts to connect the OHV driving patterns through mud puddles or natural depressions and the direct relationship to the acceleration of trail erosion. I would contend that this statement is nebulous and really only applies to the point location of the puddle/bog erosion and not to the trail outside these natural granitic formations.

Comments on SWQCBCVR Sediment Assessment (Attachment A)

Item# 9 of the Order states:

"Central Valley Water Board staff completed a short-term sediment study along the Rubicon Trail during July and August 2008. Staff identified segments of the Rubicon Trail that are hydrologically connected to watercourses tributary to Loon Lake and the Rubicon River, and quantified the sediment volume along these trail segments by measuring the dust layer. With this information, staff estimated that between 75 and 100 cubic yards (or approximately 8 to 10, 10-yard dump trucks) of sediment is likely discharging from the El Dorado County portion of the Rubicon Trail to waters of the state annually. Attachment A, which is attached hereto and made part of this Order, contains the results of the sediment study."

Attachment A: Assessment of Sediment Delivery From the Rubicon Jeep Trail

1. Methods for Sediment Estimation

Within Attachment A, third page, the authors utilize a broad based equation for estimating production from an OHV trail (Megahan 1974) equation (1):

$E_t = E_b + E_s$; where

E_t is the total estimated sediment production volume in cubic yards/yr

E_b is an estimated sediment production volume from direct rainfall impacts to the soil in cubic yards/yr

E_s is an estimated sediment production volume from OHV traffic which is approximated by field measurements of dust layer along the length and width of the trail in cubic yards/yr

The sediment production analysis addresses the trail at the hydrologically connected trail segments. The authors define the term "hydrologically connected" as:

"Trail segments were determined to be hydrologically connected when: 1) Trail segments discharged runoff and sediment directly into a stream at a trail-stream crossing; 2) Runoff and sediment from trail segments traveled diffusely across hillslopes and subsequently delivered to the stream channel; 3) Runoff and sediment from trail segments was discharged into gullies that were connected to the channel network; 4) Runoff and sediment from trail segments was discharged into unchanneled swales that were visibly connected to the channel network; and 5) Low order stream channels were intercepted onto the trail and subsequently rerouted back into the channel network."

Within this analysis, the authors elect to ignore the E_b component of the equation which can be a substantial sediment production number cubic yards/year (CY/yr) from the surrounding watershed areas that are connected directly to the trail system within the County jurisdictional area (see previous comments related to natural erosion). Based on the Draft Rubicon Trail Assessment map provided by the California Geological Survey (Exhibit 1), there are very large delineated watersheds that drain onto the Rubicon Trail that will produce considerable amounts of granitic soil deposits during normal spring run-off and during medium to high intensity rainfall events.

Furthermore, the authors assume that 100% of the sediment production from the trail calculated within this estimated formula is delivered to the Waters of the State on an annual basis. This assumption is not based on hydrologic connectivity, in that, the sediment delivered to the Waters of the State are only connected during certain precipitation events. Therefore, a more thorough hydrologic analysis should

be used to define the annual sediment delivery from the trail versus the basic formula used within Attachment A.

Precipitation in the form of rainfall is perhaps the most important variable in estimating sediment load from runoff to receiving waters. El Dorado County maintains a variety of meteorological stations including a station at Tahoma, CA (Tahoma) near the eastern terminus of the Rubicon Jeep Trail (RJT) within the Tahoe Basin where precipitation is measured at 10-minute intervals. During the months of July, August and September 2008, only 0.03 inches of rain fell in Tahoma, therefore, likely very limited sediment transport occurred from the sediment measured within Attachment A in August from the RJT to waters of the state for these months. In October 2009, approximately 1.0 inch of rainfall was measured in Tahoma during a variety of storms with a median rainfall intensity during each storm equal to 0.06 inches per hour and a maximum rainfall intensity of 0.18 inches per hour having occurred for only 10-minutes.

According to the Assessment, Coe visited the site several times in August, 2008. However, as stated previously, there was no rain in the summer of 2008 during the months of July, August or September, but there was about 1 inch of rain in October (based on Tahoma measurements). Obviously, without rainfall there would be no hydrologic connectivity of sediment to surface waters. Therefore, an assessment of sediment load to surface water must be conducted during wet-weather conditions, not dry weather conditions as were present in August.

Within Attachment A, the authors assumed the presence of overland flow from the RJT to surface waters of the state in estimating the annual sediment load. This assumption does not consider initial abstraction of the soils, the infiltration of precipitation, or the transmission losses from the runoff from RJT prior to reaching the waters of the state. Therefore, it is the Departments contention that the infrequent low intensity rainfall conditions which are present along the RJT during the summer months produce sediment mobilization and overland flow transport conditions which result in sediment reaching the waters of the state at fractions significantly less than 100% as assumed by the authors. More accurate sediment loading estimates must be calculated using rainfall and transmission loss variables and validated with measured or simulated sediment loads from the RJT to waters of the state. Only with accurate sediment loads can the Department evaluate and establish priorities for addressing the impacts of the RJT to receiving waters of the state.

2. Dust Layer

Within Attachment A, the authors assume that the dust depth is directly related to the trail use, or 100% OHV, and that within this sediment supply volume the natural occurring dust layer volume is 0 %. This assumption is extremely misleading and overestimates the amount of dust sediment volume generated by the OHV mechanical erosion and underestimates the amount of dust sediment created by natural erosive processes.

3. Figure 2

Figure 2 of Attachment A is a graph of Predicted Sediment Output from Measured Dust Layer from a published work by Ziegler based on studies in Thailand. The Authors assumption that the correlation between predictions and observed sediment yield for this study in the Sierras will have the same relationship as Ziegler's study using simulated rainfall in northern Thailand is a poor assumption since the authors did not make observations during rainfall events. Ziegler's published peer reviewed work conforms to scientific standards of "Hydrologic Processes" and Earth Surface Processes and Landforms", however the authors did not complete this same level of observations within these scientific standards hence, this assumption is not directly proportional, therefore false. Furthermore, the primary means of sediment transport is rainfall, the Sierras are a snowmelt driven watershed and northern Thailand is not.

4. Beneficial Use Impairment

The methods used in the pebble count survey are not well documented. Could it be that the larger grain sizes upstream are due to different slopes of the channel where the samples were collected? Were samples collected using the same techniques and what about replications? Also, is this reach of Ellis Creek crossing a fish passage site for upstream spawning? The Department would recommend a more comprehensive fish passage/stream crossing analysis in regards to the impaired use issue.

5. Figure 5

Figure 5 presents the sediment production from their calculations relative to measured logging road sediment production. The authors concluded that this comparison validates the absence of drainage structures in the RJT. The conclusion has not been validated by similar studies, is inaccurate, and is not representative of how sediment transport conditions happen in nature, and therefore are a poor means of evaluating the water quality impact of the RJT.

The comparison of the Rubicon highly granitic erosive trail system to that of forested logging roads is a very poor comparison and is misleading, hence, the exaggerated 50-fold difference. The department would recommend using other OHV trail systems within California or Nevada which have similar watershed and user characteristics as the RJT to complete a comprehensive comparison analysis.

6. Mapping the Segments

Within Attachment A there is a table (table 1) which identifies various segments that were measured during the August assessment. In order for the Department to evaluate these segments with respect to the assumptions made

related to connectivity to waters of the state, a geo-referenced site map which identifies these segments will be required. Therefore, the Department would recommend that the SWQCBCVR staff utilize the Draft Rubicon Trail Assessment map provided by the California Geological Survey (Exhibit 1) for this exercise.

7. Conclusion

It is the Department's opinion that the methods used and the assumptions defined within this sediment assessment are merely sediment guesses with no direct measurements or observed sediment transport between the Rubicon Jeep Trail (RJT) and waters of the state. In the absence of direct measurements of sediment load from the RJT to waters of the state, indirect estimates must be calculated using more sophisticated models which take into account precipitation frequencies, topography, soil type, transpiration/evaporation rates, and other key parameters to estimate soil loss and sediment transport. Therefore, the estimated 100 CY sediment production rate and delivery to the waters of the state is unjustified.

Comments on SWQCBCVR Board Order R5-2009-XXXX

Item #3

Item 3 in the draft order proposes that an O&M plan be submitted within 12 weeks from issuance of the order. Based on the amount of detail within this defined scope of work (a-m), it is estimated that the Department would need a minimum of 12 months to complete an O&M Plan and updated EIR for the review and comment by the SWQCBCVR and the County of El Dorado Board of Supervisors. As previously mentioned, the Department is working with the California Geological Survey with respect to a basemap assessment on the Rubicon Trail which we hope to get by the end of March 2009. This Product will be considered the Preliminary basemap for which all future field topographic surveys, water quality assessments, soil/geo field analysis, and specific special surveys will be based on. Therefore, in order to facilitate the Department's recommendations for the development of an O&M Plan, we have prepared a preliminary estimated schedule with milestones.

Estimated O&M Plan Development Schedule

Task	Estimated Due Date
Prelim Topo/Problem Basemap (CGS)	March 2009
Preliminary Work Plan and Charter	May 2009
Scoping Meeting TAC	June 2009
Field Survey Assessments and Water Quality Monitoring	May 2009 – Nov 2009
Final Topo/Property net Basemap/Problem Map	Nov 2009
Draft Rubicon Trail BMP Alternative Map/Report and O&M Plan	Jan 2010
Draft Environmental Review	Jan 2010
TAC Meeting	Jan 2010

SWQCBCVR and the County of El Dorado Board of Supervisors Meeting for Draft Review	Jan 2010
Final Adopted Environmental Document	March 2010
Final Rubicon Trail BMP Alternative Map/Report and O&M Plan	March 2010
O&M Plan Implementation	May 2010

The Department has completed various Projects within the Tahoe Basin related to erosion control and water quality improvements and has followed a similar milestone schedule with much success. However, the most important aspect of the schedule is calibration and commitments by the other TAC members, which might be very difficult based on the diverse characters of the Rubicon TAC. Also, as you are aware, this schedule is driven by funding. The O&M effort alone could be well into the \$250k range if not more, dependant on the necessitation of detail by various TAC members. I have not reviewed the Draft EIR or Master Plan, so maybe the costs to supplement the documents are minimal if we can utilize most of the information and technical studies.

In regard to Item #3b, it is of importance to note that the SWQCB – Lahontan Region, under our current Municipal Permit, requires us to develop a prioritization list of Projects based on very fine sediment reduction allocations within the County's jurisdiction. This is the predecessor to the next step in water quality regulations in the Tahoe Basin (Total Maximum Daily Load). So, the Department would strongly recommend discussing this key point and how we have started on this effort in Lake Tahoe.

Item #3c – The county does not have easements along most of the Rubicon Trail, and in some parts of the Trail there are alternate routes used to avoid obstacles and to avoid some of the sensitive muddy areas, etc.

Item #4 this should not be a problem as long as we are granted the 12 months to develop the O&M plan.

Item #5 could be accomplished only for those items that are currently on-going but not yet in the official O&M Plan.

Item #6 could be accomplished, but we need to understand the report requirements further.

Item #7 I believe that the projected completion date for the two bridges is the end of the 2010 construction season, depending on how long it takes for the environmental analysis to be completed, and the variables of the construction season at that altitude and location. Matt Smeltzer should have more detailed information on this.

I believe that I have covered all the items within my purview which hopefully will assist the County with respect to the Draft CAO and conditions thereof. I look forward to working with you on this Project and hope that my analysis of the CAO

and related documents provides some insight. If you have any questions or require anything further, please call me at extension 7910.

Thank you for your assistance.

**Environmental
Management
Department**

**Gerri Silva
MS REHS
Director**



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Memo



To: Ed Knapp, County Counsel

From: Dave Johnston, Environmental Management Department

Date: 3/30/2009

Re: 2004 Buck Island, Rubicon Springs and Spider Lake Coliform Data

Attached for your review are scanned data sheets for surface water samples collected during 2004. Samples were collected from Buck Island Reservoir and Rubicon River at Rubicon Springs by EMD's Christine Mearse, REHS. Samples were collected at and near Spider Lake by Steve Peterson and Amanda Rose of Environmental Stewardship and Planning (ESP).

All samples were delivered to and analyzed by the El Dorado County Public Health Laboratory. The Public Health Lab maintains certification through the Environmental Laboratory Accreditation Program. Public Health lab staff analyzed the samples by the colilert method (EPA standard method 9223b) for total and fecal coliform. The method does not differentiate between human versus animal sources. There isn't currently a quantitative method for specifically measuring human fecal bacteria (expensive genetic studies can give a presence/absence result). High levels of coliform bacteria can indicate the presence of other pathogenic organisms. The data is summarized as follows:

Location	Date	Total Coliform	Fecal Coliform, MPN/100 ml
Buck Island North Dam	6/28/04	547.5	0
Rubicon River downstream from Rubicon Springs campground	6/28/04	>2419.2	4.1
Rubicon River at Rubicon Springs bridge	6/28/04	524.7	3.1
Pond at Spider Lake	7/1/04	>2419.2	55.6
Pond #2 at Spider Lake	7/1/04	1553.1	2
Jut. At Spider Lake	7/1/04	218.7	12.2
Outlet at Dam	7/1/04	>2419.2	60.1
Lake at Dam	7/1/04	579.4	0
Pond by Spider	7/6/04	>2419.2	24.9
Above Spider	7/6/04	64.5	0
Jetty at Spider	7/6/04	113.7	0
Above Dam	7/6/04	980.4	0
Below Dam	7/6/04	1011.1	2.0
EMD Policy #500 limits			250, 400
CRWQCB Concentration Limit for Recreational Contact, 30 Day Geometric Mean			200
Geometric Mean of this data set			3.9

This sample data is considered reliable and appears consistent with data from similar studies, including the Upper American River Project conducted by SMUD. It is not clear whether the ESP sample locations were the same for both days (7/1/04 and 7/6/04) as the lab slips were labeled differently. The closure at Spider Lake was not based on these surface water results, but rather on the excessive accumulation of human feces and garbage in the area around the lake. Historically, to address public health hazards at natural bathing places our Department has followed followed policy #500-03 which states:

If, during routine sampling of natural bathing places, a fecal coliform count of over 250 is found, a second sample shall be taken the following week. When two consecutive samples are over 250 fecal coliform, the bathing place shall be posted as follows:

*WARNING! Contaminated
Water
May Be Hazardous to Your
Health*

If, during routine sampling of natural bathing places, a fecal coliform count of over 400 is found, the bathing place shall be posted as follows:

*WARNING! Contaminated Water
Do Not Drink, Fish, Swim, or Wade
in this Water*

Weekly samples shall be taken of bathing places with coliform counts over 400. The source of the high contamination level shall be investigated and corrective action taken if possible.

When two consecutive samples are below 400 but above 250 fecal coliform, the posting shall be changed to the lesser warning. When two consecutive samples are below the 250 fecal coliform count, the warnings shall be removed.

Natural bathing places over 250 fecal coliform but under 400 fecal coliform shall not be sampled weekly after posting. Routine sampling shall continue.

The California Regional Water Quality Control Board's Water Quality Control Plan for the Sacramento and San Joaquin River basins which includes a fecal coliform concentration limit of 200 as a 30 day geometric mean. That limit would typically be applied to one specific water body, whereas this data set contains values from several water bodies. However, all samples results and the geometric mean of this combined data set were both well below the limit.

EL DORADO COUNTY PUBLIC HEALTH LABORATORY
531 SPRING STREET
PLACERVILLE, CA 95667
(530) 821-6115

SAMPLE FOR MICROBIOLOGICAL EXAMINATION

PURVEYOR AND ADDRESS (INCLUDE CITY)

DATE COLLECTED

LAB NO.

TIME COLLECTED

SAMPLE NO.

EST
3850 UC Street, Box 204
Placerville, CA 95816
PHONE # 916-455-1115 FAX # 916-455-1116

TYPE OF SAMPLE
(Source)
☐ DRINKING WATER
☐ WELL
☐ SPRING
☐ BOTTLED
☐ SWIMMING POOL
☐ RAW SURFACE
☒ OTHER

SAMPLE CONDITION
(Lab Use Only)
☐ COOL
☐ WARM
☐ FROZEN
☐ <100 ml (ONS)
☐ TRANSIT TIME TOO LONG
☐ OTHER

SAMPLING POINT

COLLECTOR

REMARKS

RESULTS (TO BE COMPLETED BY LABORATORY)

DATE AND TIME RECEIVED	TIME STARTED	TIME FINISHED	DATE AND TIME REPORTED	TECH
7/16/04 2:05	3:10	3:10	7/17/04 2:00	KR
HPC/100ml	TOT	TCS	Total Coliform MPN/100ml	ABS
42	12	12	64.5	
Pseudomonas CFU/ml	ECI	EC5	E. COLI MPN/100ml	OTHER RESULTS
0	0	0	0.0	
NITRATE	NITRITE			
				<input type="checkbox"/> COLLETT METHOD

EL DORADO COUNTY PUBLIC HEALTH LABORATORY 831 SPRING STREET PLACERVILLE, CA 95667 (530) 821-6115				DATE COLLECTED 7/6/04		LAB NO. 5725	
SAMPLE FOR MICROBIOLOGICAL EXAMINATION PURVEYOR AND ADDRESS (INCLUDE CITY)				TIME COLLECTED 10:45 am		SAMPLE NO. 3	
3500 Cedar Street, Box 334 Placerville, CA 95667				TYPE OF SAMPLE (Source) <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> WELL <input type="checkbox"/> SPRING <input type="checkbox"/> BOTTLED <input type="checkbox"/> SWIMMING POOL <input type="checkbox"/> RAW SURFACE <input checked="" type="checkbox"/> OTHER <u>ice</u>		SAMPLE CONDITION (Lab Use Only) <input type="checkbox"/> COOL <input type="checkbox"/> WARM <input type="checkbox"/> FROZEN <input type="checkbox"/> <100 ml (ONS) <input type="checkbox"/> TRANSIT TIME TOO LONG <input type="checkbox"/> OTHER _____	
PHONE # 530-821-6115 FAX # 530-821-6115 SAMPLING POINT _____ COLLECTOR _____				REMARKS no other information			
RESULTS (TO BE COMPLETED BY LABORATORY)							
DATE AND TIME RECEIVED 7/6/04 2:45p		TIME STARTED 3:00p		TIME FINISHED 3:10p		DATE AND TIME REPORTED 7/7/04 3:00p	
TECH K.L.		ABS 1137		TOTAL COLIFORM <input type="checkbox"/> PRESENT <input type="checkbox"/> ABSENT		E. COLI <input type="checkbox"/> PRESENT <input type="checkbox"/> ABSENT	
HPC/ML 42		TCS 11		OTHER RESULTS		E. COLI MPN/100ml <input type="checkbox"/> PRESENT <input type="checkbox"/> ABSENT	
Pseudomonas CFU/ml 0		ECS 0		E. COLI MPN/100ml 0.0		NITRATE	
NITRATE		NITRITE		[] COLLEBT METHOD			

EL DORADO COUNTY PUBLIC HEALTH LABORATORY
 931 SPRING STREET
 PLACERVILLE, CA 95667
 (530) 621-6115

DATE COLLECTED 7/16/04 LAB NO. 001570

TIME COLLECTED 04:00 PM SAMPLE NO. 4

SAMPLE FOR MICROBIOLOGICAL EXAMINATION
 PURVEYOR AND ADDRESS (INCLUDE CITY)
 3000 Highway 99, Suite 300
 Placerville, CA 95667

PHONE # 530-621-6115 FAX # 530-621-6115

SAMPLING POINT COLLECTOR NAME: Peter S. Jones

REMARKS

RESULTS TO BE COMPLETED BY LABORATORY

DATE AND TIME RECEIVED 7/16/04 245 TIME STARTED 3:10 PM TIME FINISHED 7:17 PM DATE AND TIME REPORTED 7/16/04 3:30 PM TECH VJC

HPCLM TQ TCS Total Coliform MPN/100ml ABS

Pseudomonas CFU/ml ECOL ECOL MPN/100ml OTHER RESULTS TOTAL COLIFORM

NITRATE NITRITE E. COLI PRESENT / ABSENT E. COLI PRESENT / ABSENT COLLETT METHOD

EL DORADO COUNTY PUBLIC HEALTH LABORATORY 831 SPRING STREET PLACERVILLE, CA 95667 (530) 621-6115				DATE COLLECTED 7/11/04		LAB NO. 07	
SAMPLE FOR MICROBIOLOGICAL EXAMINATION PURVEYOR AND ADDRESS (INCLUDE CITY)				TIME COLLECTED		SAMPLE NO.	
PHONE # 455-1115 FAX # 702-455-1118 SAMPLING POINT <i>Publicly Owned</i> COLLECTOR <i>Steve Peterson</i>				TYPE OF SAMPLE (Source) <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> WELL <input type="checkbox"/> SPRING <input type="checkbox"/> BOTTLED <input type="checkbox"/> SWIMMING POOL <input type="checkbox"/> RAW SURFACE <input checked="" type="checkbox"/> OTHER <i>LC</i>		SAMPLE CONDITION (Lab Use Only) <input type="checkbox"/> COOL <input type="checkbox"/> WARM <input type="checkbox"/> FROZEN <input type="checkbox"/> <100 ml (ONS) <input type="checkbox"/> TRANSIT TIME TOO LONG <input type="checkbox"/> OTHER	
RESULTS TO BE COMPLETED BY LABORATORY							
DATE AND TIME RECEIVED 7/16/04 2450		TIME STARTED 3:00		TIME FINISHED 7:11		DATE AND TIME REPORTED 7/16/04	
HPC/Ml 49		TCS 48		Total Coliform MPN/100ml 224192		ABS 11	
Pseudomonas CFU/ml 20		ECOL 0		E. COLI MPN/100ml 9		OTHER RESULTS TOTAL COLIFORM <input type="checkbox"/> PRESENT <input type="checkbox"/> ABSENT	
NITRATE		NITRITE		E. COLI <input type="checkbox"/> PRESENT <input type="checkbox"/> ABSENT		COLLEBT METHOD <input type="checkbox"/>	

EL DORADO COUNTY PUBLIC HEALTH LABORATORY 831 SPRING STREET PLACERVILLE, CA 95667 (530) 621-6115				DATE COLLECTED 7/16/14		LAB NO. 11 200	
SAMPLE FOR MICROBIOLOGICAL EXAMINATION PURVEYOR AND ADDRESS (INCLUDE CITY)				TIME COLLECTED 4:50 PM		SAMPLE NO. 5	
PHONE # 530-621-6115				FAX # 530-621-6115		REMARKS 1000 CFU/100ml LE 304	
SAMPLING POINT 1000 CFU/100ml LE 304				COLLECTOR JOE BLANCHARD		TYPE OF SAMPLE (Source) <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> WELL <input type="checkbox"/> SPRING <input type="checkbox"/> BOTTLED <input type="checkbox"/> SWIMMING POOL <input type="checkbox"/> RAW SURFACE <input type="checkbox"/> OTHER	
DATE AND TIME RECEIVED 7/16/14 2:45				TIME STARTED 3:00		TIME FINISHED 7:10	
HPC/Ml 48				TCS 48		Total Coliform MPN/100ml 1011	
Pseudomonas CFU/ml 2				ECS 2		E. COLI MPN/100ml 2.0	
NITRATE				NITRITE		OTHER RESULTS ABS	
DATE AND TIME REPORTED 7/16/14 3:30				TECH JLC		TOTAL COLIFORM <input type="checkbox"/> PRESENT <input type="checkbox"/> ABSENT	
E. COLI <input type="checkbox"/> PRESENT <input type="checkbox"/> ABSENT				COLLEBT METHOD		E. COLI <input type="checkbox"/> PRESENT <input type="checkbox"/> ABSENT	

LAB NO. _____

SAMPLE _____

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SAMPLE CONDITION

☐ COOL
☐ WARM
☐ FROZEN
☐ <100 ml (ONS)
☐ TRANSIT TIME TOO LONG
☐ OTHER _____

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Table 1

AND TIME

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DATE COLLECTED	LAB NO.
7/1/86	56
TIME COLLECTED	SAMPLE NO.
1:15	4

TYPE OF SAMPLE (Source)	SAMPLE CONDITION (Lab Use Only)
<input type="checkbox"/> DRINKING WATER	<input type="checkbox"/> COOL
<input type="checkbox"/> WELL	<input type="checkbox"/> WARM
<input type="checkbox"/> SPRING	<input type="checkbox"/> FROZEN
<input type="checkbox"/> BOTTLED	<input type="checkbox"/> <100 ml (ONS)
<input type="checkbox"/> SWIMMING POOL	<input type="checkbox"/> TREATMENT TANK
<input type="checkbox"/> RAW SURFACE	<input type="checkbox"/> LONG
<input type="checkbox"/> OTHER _____	<input type="checkbox"/> OTHER _____

COLLECTOR

COLLECTOR

REMARKS

REMARKS

RESULTS (TO BE COMPLETED BY LABORATORY)

RESULTS (TO BE COMPLETED BY LABORATORY)

LABORATORY

[illegible]

TIME STARTED	TIME FINISHED
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TIME STARTED	TIME FINISHED
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DATE

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TCS	Total C
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TCS	Total C
100	100

2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900	1899	1898	1897	1896	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886	1885	1884	1883	1882	1881	1880	1879	1878	1877	1876	1875	1874	1873	1872	1871	1870	1869	1868	1867	1866	1865	1864	1863	1862	1861	1860	1859	1858	1857	1856	1855	1854	1853	1852	1851	1850	1849	1848	1847	1846	1845	1844	1843	1842	1841	1840	1839	1838	1837	1836	1835	1834	1833	1832	1831	1830	1829	1828	1827	1826	1825	1824	1823	1822	1821	1820	1819	1818	1817	1816	1815	1814	1813	1812	1811	1810	1809	1808	1807	1806	1805	1804	1803	1802	1801	1800	1799	1798	1797	1796	1795	1794	1793	1792	1791	1790	1789	1788	1787	1786	1785	1784	1783	1782	1781	1780	1779	1778	1777	1776	1775	1774	1773	1772	1771	1770	1769	1768	1767	1766	1765	1764	1763	1762	1761	1760	1759	1758	1757	1756	1755	1754	1753	1752	1751	1750	1749	1748	1747	1746	1745	1744	1743	1742	1741	1740	1739	1738	1737	1736	1735	1734	1733	1732	1731	1730	1729	1728	1727	1726	1725	1724	1723	1722	1721	1720	1719	1718	1717	1716	1715	1714	1713	1712	1711	1710	1709	1708	1707	1706	1705	1704	1703	1702	1701	1700	1699	1698	1697	1696	1695	1694	1693	1692	1691	1690	1689	1688	1687	1686	1685	1684	1683	1682	1681	1680	1679	1678	1677	1676	1675	1674	1673	1672	1671	1670	1669	1668	1667	1666	1665	1664	1663	1662	1661	1660	1659	1658	1657	1656	1655	1654	1653	1652	1651	1650	1649	1648	1647	1646	1645	1644	1643	1642	1641	1640	1639	1638	1637	1636	1635	1634	1633	1632	1631	1630	1629	1628	1627	1626	1625	1624	1623	1622	1621	1620	1619	1618	1617	1616	1615	1614	1613	1612	1611</
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OTHER RE:

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Fig.

Fig.

E. COLI MPM-1000

OTHER NAMES

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EL DORADO COUNTY PUBLIC HEALTH LABORATORY 931 SPRING STREET PLACERVILLE, CA 95667 (530) 621-6115						DATE COLLECTED 7/1/04		LAB NO. CC 56	
SAMPLE FOR MICROBIOLOGICAL EXAMINATION						TIME COLLECTED 1:11		SAMPLE NO. 3	
PURVEYOR AND ADDRESS (INCLUDE CITY)						TYPE OF SAMPLE (Source) [] DRINKING WATER [] WELL [] SPRING [] BOTTLED [] SWIMMING POOL [] RAW SURFACE [] OTHER _____		SAMPLE CONDITION (Lab Use Only) [] COOL [] WARM [] FROZEN [] <100 ml (ONS) [] TRANSIT TIME TOO LONG [] OTHER _____	
PHONE # 712-4530	FAX #	COLLECTOR Amanda Rose	REMARKS						
SAMPLING POINT 1012 - Spruce	RESULTS TO BE COMPLETED BY LABORATORY								
DATE AND TIME RECEIVED 7/1/04 4:53p	TIME STARTED 4:53p	TIME FINISHED	DATE AND TIME REPORTED 7/2/04 4:53p	TECH DJ					
HPC/ml 48	TCS 15	Total Coliform MPN/100ml 218.7	ABS	TOTAL COLIFORM [] PRESENT [] ABSENT					
Pseudomonas CFU/ml 11	E. coli 0	E. coli MPN/100ml 12.2	OTHER RESULTS	E. coli [] PRESENT [] ABSENT					
NITRATE	NITRITE		[] COLLEKT METHOD						

EL DORADO COUNTY PUBLIC HEALTH LABORATORY
931 SPRING STREET
PLACERVILLE, CA 95667
(530) 621-6115

SAMPLE FOR MICROBIOLOGICAL EXAMINATION

PURVEYOR AND ADDRESS (INCLUDE CITY)

ESP
2830 Eup Street, Ste 304
Placerville, CA 95816

PHONE # 116 455 1115 FAX # 916 455 1115

SAMPLING POINT

COLLECTOR

REMARKS

7/1/04 9:55

Time Started 4:55p

Time Finished 7:2104

DATE AND TIME REPORTED 4:55p

TECH DTC

DATE AND TIME RECEIVED

RESULTS TO BE COMPLETED BY LABORATORY

DATE AND TIME REPORTED

TECH

HPCM

TO 49

TOS 49

Total Coliform MPN/100ml

2249.2

ABS

TOTAL COLIFORM

Pseudomonas CFU/ml

EQ 32

EQS 4

E. COLI MPN/100ml

55.6

OTHER RESULTS

E. COLI
[] PRESENT [] ABSENT

NITRATE

NITRITE

[] COLLETT METHOD

DATE COLLECTED 7/1/04

LAB NO. 66

TIME COLLECTED 1:15pm

SAMPLE NO. 1

TYPE OF SAMPLE (Source)

[] DRINKING WATER

[] WELL

[] SPRING

[] BOTTLED

[] SWIMMING POOL

[] RAW SURFACE

[] OTHER

SAMPLE CONDITION (Lab Use Only)

[] COOL

[] WARM

[] FROZEN

[] <100 ml (ONS)

[] TRANSIT TIME TOO LONG

[] OTHER

EL DORADO COUNTY PUBLIC HEALTH LABORATORY 831 SPRING STREET PLACERVILLE, CA 95667 (530) 627-6115		DATE COLLECTED 7/1/04	LAB NO. 0055
SAMPLE FOR MICROBIOLOGICAL EXAMINATION PURVEYOR AND ADDRESS (INCLUDE CITY)		TIME COLLECTED 1:15pm	SAMPLE NO. 2
ESP 3530 Eue Street, Ste. 304 Sacramento, CA 95816		TYPE OF SAMPLE (Source) <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> WELL <input type="checkbox"/> SPRING <input type="checkbox"/> BOTTLED <input type="checkbox"/> SWIMMING POOL <input type="checkbox"/> RAW SURFACE <input type="checkbox"/> OTHER _____	SAMPLE CONDITION (Lab Use Only) <input type="checkbox"/> COOL <input type="checkbox"/> WARM <input type="checkbox"/> FROZEN <input type="checkbox"/> <100 ml (ONS) <input type="checkbox"/> TRANSIT TIME TOO LONG <input type="checkbox"/> OTHER _____
PHONE # 916-455-1115 FAX # 916-455-1115 SAMPLING POINT 20 Spades Lake Rd. 95816	COLLECTOR RESULTS TO BE COMPLETED BY LABORATORY	REMARKS	
DATE AND TIME RECEIVED 7/1/04 9:50	TIME STARTED 4:00pm	TIME FINISHED 7/1/04	DATE AND TIME REPORTED 7/1/04 4:55pm
HPC/Ml 49	TCS 44	Total Coliform MPN/100ml 153	ABS 1
Pseudomonas CFU/ml 2	E. COLI 0	E. COLI MPN/100ml 20	OTHER RESULTS E. COLI <input type="checkbox"/> PRESENT <input type="checkbox"/> ABSENT <input type="checkbox"/> PRESENT <input type="checkbox"/> ABSENT
NITRATE		NITRITE	
NITRATE		<input type="checkbox"/> COLLETT METHOD	

EL DORADO COUNTY PUBLIC HEALTH LABORATORY
831 SPRING STREET
PLACERVILLE, CA 95667
(530) 621-6115

DATE COLLECTED

6-27-04

LAB NO.

522

SAMPLE FOR MICROBIOLOGICAL EXAMINATION

PURVEYOR NAME AND ADDRESS (INCLUDE CITY)

Rubicon Trail

TIME COLLECTED

10:50am

SAMPLE NO.

251

TYPE OF SAMPLE
(Source)

☐ DRINKING WATER
☐ WELL
☐ SPRING
☐ BOTTLED
☐ SWIMMING POOL
☒ GRASS SURFACE
☐ OTHER

SAMPLE CONDITION
(Lab Use Only)

☐ COOL
☐ WARM
☐ FROZEN
☐ <100 ml
☐ TRANSIT TIME TOO LONG
☐ OTHER

PHONE #

FAX #

SAMPLING POINT

COLLECTOR

REMARKS

831 Spring

CEM

Quanti-tray

DATE AND TIME RECEIVED

RESULTS TO BE COMPLETED BY LABORATORY

DATE AND TIME REPORTED

TECH

6/28/04 815a

945a

6/29/04 1020

WLS

HPC/ml

TCL

TCS

Total Coliform MPN/100ml

ABS

TOTAL COLIFORM

Pseudomonas CFU/ml

ECL

ECS

E. COLI MPN/100ml

OTHER RESULTS

PRESENT ABSENT

NITRATE

NITRITE

COLLECT METHOD

EL DORADO COUNTY PUBLIC HEALTH LABORATORY
831 SPRING STREET
PLACERVILLE, CA 95667
(530) 821-6115

DATE COLLECTED

LAB NO.

6-27-04

024

TIME COLLECTED

SAMPLE NO.

7:45 am

BI Dam

SAMPLE FOR MICROBIOLOGICAL EXAMINATION

PURVEYOR NAME AND ADDRESS (INCLUDE CITY)

Robinson Trail

TYPE OF SAMPLE
(Source)
☐ DRINKING WATER
☐ WELL
☐ SPRING
☐ BOTTLED
☐ SWIMMING POOL
☒ GRAV SURFACE
☐ OTHER

SAMPLE CONDITION
(Lab Use Only)
☐ COOL
☐ WARM
☐ FROZEN
☐ <100 ml
☐ TRANSIT TIME TOO LONG
☐ OTHER

PHONE #

FAX #

SAMPLING POINT

COLLECTOR

REMARKS

El Dorado North Dam

CKM

Quanti Tray

RESULTS TO BE COMPLETED BY LABORATORY

DATE AND TIME RECEIVED

TIME STARTED

TIME FINISHED

DATE AND TIME REPORTED

TECH

6/28/04

8:50

9:45

6/29/04

10:20

CK

HP/CM

49

TCS

28

Total Coliform MPN/100ml

ABS

5475

TOTAL COLIFORM

Pseudomonas CFU/ml

ECL

ECS

0.0

E. COLI MPN/100ml

OTHER RESULTS

E. COLI

NITRATE

NITRITE

☐ COLLETT METHOD

EL DORADO COUNTY PUBLIC HEALTH LABORATORY
931 SPRING STREET
PLACERVILLE, CA 95667
(530) 621-6115

DATE COLLECTED

LAB NO.

543

6-27-04

SAMPLE NO.

RS

SLAB

11:30 AM

SAMPLE FOR MICROBIOLOGICAL EXAMINATION

PURVEYOR NAME AND ADDRESS (INCLUDE CITY)

Rubicon Trail

PHONE #

FAX #

SAMPLING POINT

COLLECTOR

REMARKS

Rubicon Springs bridge

SKM

Quanti-Tray

RESULTS TO BE COMPLETED BY LABORATORY

DATE AND TIME RECEIVED

TIME STARTED

TIME FINISHED

DATE AND TIME REPORTED

TECH

6/28/04 8:15 AM

9:45 AM

6/29/04 10:20 AM

W

HPC/ml

TCL

TCS

Total Coliform MPN/100ml

ABS

TOTAL COLIFORM

Pseudomonas CFU/ml

ECL

ECS

E. COLI MPN/100ml

OTHER RESULTS

E. COLI

NITRATE

NITRITE

[] COLLETT METHOD

Rubicon Trail
Automotive Fluid Spill Prevention
and Control Program
Progress Report
3/1/04-3/23/09

Prepared by:
El Dorado County
Environmental Management Department
3/23/2009

CONTENTS

- 1) INTRODUCTION
- 2) WORK COMPLETED
- 3) SUMMARY
- 4) SUPPORTING DOCUMENTATION

1) INTRODUCTION

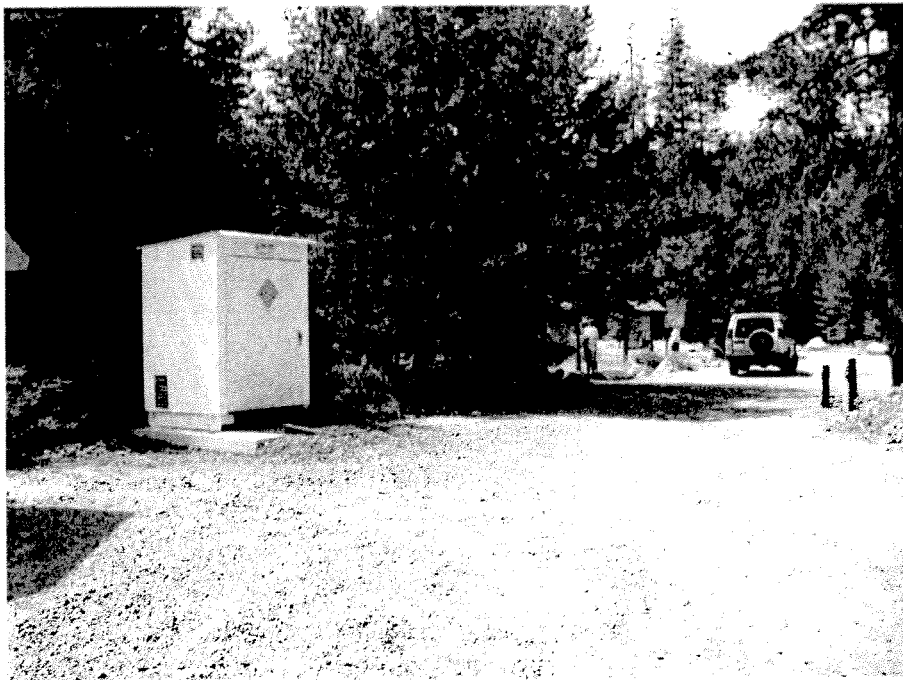
This report summarizes the activities undertaken by the El Dorado County Environmental Management Department (EMD) to prevent and control automotive fluid spills on the Rubicon Trail 3/1/04 through 3/23/09. State of California used oil recycling grant funds were utilized to implement this project.

2) WORK COMPLETED

a) PERMANENT COLLECTION FACILITIES

- (1) Install three used oil collection buildings to be placed at designated entry points to the Rubicon Trail. Secure bids, order equipment, install equipment and signage.

Work Completed: For the temporary storage of saturated oil absorbent materials, six-drum hazardous materials storage buildings were needed at the access points to the Rubicon Trail. With USFS staff, storage building locations were selected at Ellis Creek/Loon Lake, McKinney Rubicon Springs and Wentworth Springs trailheads. EMD staff constructed concrete pads at Ellis Creek and McKinney Rubicon Springs. Volunteers constructed a pad at the Wentworth Springs trailhead. Bids were solicited from several storage building manufacturers. The units selected complied with all NFPA and Uniform Fire Code requirements. The units were delivered to the Ellis Creek and McKinney Rubicon Springs sites and set on the pads. A storage unit for Wentworth Springs will be purchased during the 2009 season. Since the facilities are often unmanned, drop slots were installed in the units to allow the public to deposit saturated absorbent at any time. The drop slots were installed at a height just above the top of 55 gallon drums. Signs stating the purpose of the storage units were obtained and affixed to the storage units. The units were grounded to reduce the threat of electrostatic discharge.



Storage Unit McKinney Rubicon Springs Trailhead



Storage Building Ellis Creek Trailhead

ABSORBENT PAD COLLECTION FACILITY

Deposit Saturated Oil Absorbent into Slot

No Other Hazardous or Solid Wastes Accepted
EDC Ordinance Code Chapter 8.38. Facility Operated by
EDC ENVIRONMENTAL MANAGEMENT DEPARTMENT
530-621-5300 www.co.el-dorado.ca.us/emd
Funded by a grant from California Integrated Waste Management Board



Sign Text and Graphic

(2) Install dry-chemical fire protection systems inside of the used oil collection buildings.

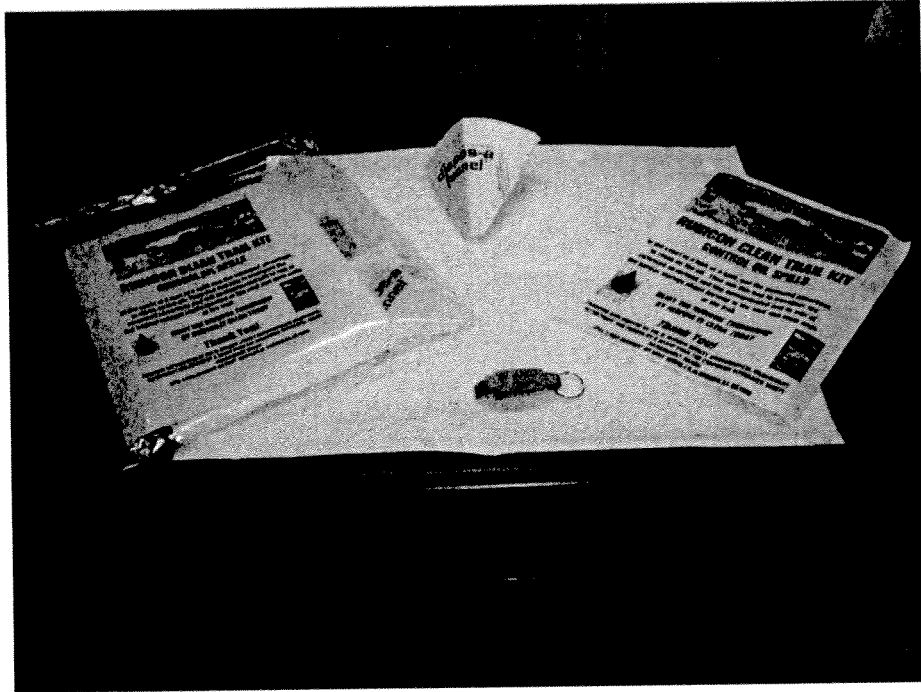
USFS staff were consulted to determine the NFPA/UFC requirements for fire suppression of drums of saturated absorbent. Fire protection systems were installed on the units. After winter snow caused the system at Ellis Creek to discharge, protective covers were installed on the units.

b) OUTREACH AND EDUCATION

- i) Develop and implement a Spill Kit distribution and saturated absorbent collection program for the users.

- (1) Select, design and obtain kit components including key chains, absorbent pads, paper funnels and plastic zip-lock bags:

Work Completed: Staff selected, ordered and obtained components.



Components of Clean Off Road Kit

- (2) Create and print brochure educating users of the Crystal Basin recreation area about the importance of preventing spills and cleaning up fluid leakage on the trail.

Work Completed: Staff created, printed and distributed a two-page brochure for the four wheel drive enthusiasts. The brochure contains the following information:



RUBICON CLEAN TRAIL KIT CONTROL OIL SPILLS

In the event of a leak or a spill, use the enclosed absorbent to clean up the oil. Then use this bag to transport the saturated absorbent and any contaminated soil to one of the hazmat storage sheds located at the east and west ends of the trail.



**ENJOY THE RUBICON TOMORROW
BY KEEPING IT CLEAN TODAY**



Thank You!

**PROGRAM IMPLEMENTED BY THE EL DORADO COUNTY ENVIRONMENTAL MANAGEMENT
DEPARTMENT AND FUNDED BY A GRANT FROM THE CALIFORNIA INTEGRATED WASTE
MANAGEMENT BOARD**

CALL 1-800-CLEANUP OR VISIT WWW.CO.EL-DORADO.CA.US/EMD

SPILL PREVENTION, RESPONSE AND RECYCLING

Before You Go

Prior to heading out on the trail, perform your pre-trip maintenance to prevent leaks and minimize the chances of breaking down. Small leaks at home can turn into major leaks under extreme conditions. Small leaks from hundreds of vehicles result in a huge impact on the trail.

Clean your engine, transmission, transfer case and driveline to check for oil leaks. Repair or replace leaking gaskets and seals. Check the fuel, cooling, brake, power steering and other systems as well. Repair or replace lines, hoses, reservoirs and other components. Install skid plates to protect critical areas from damage. Make sure your battery is firmly secured.

While Wheeling

Drive cautiously to prevent damage to your vehicle. Don't straddle large rocks that can puncture vulnerable components. Cross obstacles at an angle, one wheel at a time, raising vehicle clearance. Know where the low points on your vehicle are; the differential, transmission, transfer case, etc.

Use a spotter in front of your vehicle to let you know what's going on underneath. Know what's ahead of you. Stop frequently, get out, walk ahead and observe. Evaluate the options and select the least damaging route.

Spill Response

If you do experience a spill on the trail, the first step is to control the leak. Use whatever means available to stop or slow the leak at its source. Hoses can be clamped and in some cases small holes can be plugged.

Secondly, contain what has spilled. Use the absorbent provided to soak up any petroleum based liquid. The absorbent will float on water and skim oil off the top. You can also carry rags, kitty litter or other absorbents. Leaks can be captured in containers. After use, absorbents can be placed in the plastic bag provided for transport out of the forest. If the spill soaks into the soil, the soil can also be placed in the bag and packed out. Additional absorbent material can often be obtained at auto supply stores.

Recycling and Disposal

Saturated absorbent, rags, kitty litter, soil, etc. can be dropped off on your way out at one of the hazardous material storage sheds located at each end of the trail. The storage shed on the west end is next to the kiosk at Loon Lake. On the east end, the shed is located next to the restrooms in the parking lot.

Saturated materials can also be taken to the household hazardous waste collection facilities in your area. For facilities in El Dorado County and the hours of operation, please check our website at

www.co.el-dorado.ca.us/emd. For the nearest oil recycling facility call 1-800-CLEANUP.

This program is being implemented by the El Dorado County Environmental Management Department and funded by a grant from the California Integrated Waste Management Board. Thanks for doing your part.

(3) Draft survey for user education.

Work Completed 3/1/04-2/28/07: Staff drafted survey/pledge to interact with and collect information from users during spill kit distribution. Individual responses were examined and used by staff to initiate discussions. The survey consists of questions and an invitation to sign a pledge. The pledge and survey incorporate proven community based social marketing techniques. Specifically, users that complete a survey and sign a pledge stating they will act responsibly are statistically more likely to do so in the future, even if they had not done so in the past.

CLEAN WHEELING SURVEY

PREPARATION

Before your trip did you

Check for fluid leaks and repair as necessary?	Y	N
Install or check skid plates protecting critical parts?	Y	N
Make sure battery is secured?	Y	N

WHILE WHEELING

When off road, do you...

Avoid straddling rocks to prevent undercarriage damage?	Y	N
Cross obstacles at an angle, raising vehicle clearance?	Y	N
Know where the undercarriage low points are?	Y	N
Use a spotter?	Y	N

SPILL RESPONSE

In the event of a spill or leak do you...

Attempt to stop the leak with clamps, plugs or hoses?	Y	N
Try to catch the liquid with a container?	Y	N
Use absorbent to soak up the liquid?	Y	N
Scoop up any contaminated soil?	Y	N
Transport contaminated materials to a disposal site?	Y	N

Thanks for your time and enjoy your trip! We appreciate your help in keeping the trail clean and open. Please join us by signing this pledge....

"I pledge to help keep the Rubicon Trail clean
by preventing and controlling fluid spills"

Signature

Print

Would you like us to add your name to a published list of supporters?

Y

N

Date ____/____/____

(4) Assemble and distribute spill kits. Conduct surveys

Work Completed: EMD staff assembled spill kits. The number of days kits were distributed by EMD staff are

2004	4 days
2005	7 days
2006	10 days
2007	23 days
2008	14 days

In addition El Dorado County Sheriff's Deputies, Rubicon Oversight Committee, Friends of the Rubicon and other volunteers also distributed thousands of clean off road kits while patrolling the trail and staffing the Kiosk.

(5) Advertising

Work Completed: The program was advertised during 2005 and 2006 on a billboard located alongside Highway 50 in Camino. A majority of users traveled past this location on the way to the Ellis Creek trailhead. This advertising method was determined to be superior to local newspaper advertisements in getting the message out to the users. The billboard artwork is shown below:



Billboard Artwork

(6) Collect saturated absorbents at used oil collection cabinets.

Work Completed: Saturated absorbents collected from storage units at the end of the seasons:

2006	250 lbs
2007	200 lbs
2008	200 lbs

The majority of users do not experience vehicle damage and resulting fluid spills while using the trail. Of those that do, some may carry saturated absorbent home with them for disposal through their local household hazardous waste collection program.

3) SUMMARY

The Trail was used by thousands off-roaders during reporting period. Many of these users likely noticed the collection facilities, saw the billboard and read the informational signs, even when staff were not at the site. The EMD staff have devoted hundreds of hours to this effort, spending 68 days at the trailhead distributing spill kits. Approximately 3,000 kits have been distributed by County staff and volunteers so far. Approximately 650 lbs of saturated absorbent has been collected for proper disposal. Some used absorbent may have been taken home from the trail and disposed of through local HHW collection programs.

Direct contact with users at the point of entry was deemed to be most effective in reaching the target audience, because of the opportunity to explain the program in detail. The billboard was determined to be the most effective advertising method for reaching the population in general, because of the high traffic counts. Thousands of California residents passed by the billboard site each day.

The Rubicon survey/pledge shown above utilized proven community based social marketing techniques to positively influence user behavior. To our knowledge, this is the first time an

agency promoting oil spill prevention and control has implemented directly targeted four wheel drive enthusiasts.

4) SUPPORTING DOCUMENTATION

See attached spreadsheet of survey data gathered during 2004-2006 used oil recycling grant period.